

REMARKS

The examiner considers the claims to be drawn to two separate inventions and requires restriction to one of the following:

Group I, drawn to methods of administering poly-Glu,Tyr, and presently comprising claims 1-58; and

Group II, drawn to articles of manufacture comprising poly-Glu,Tyr, presently comprising claims 59-71.

In addition, if Group I is elected for prosecution on the merits, a single disease must be elected from among the several diseases recited throughout the claims.

Applicants elect Group I, presently comprising claims 1-58, and the single disease of "stroke," with traverse. Traversal of the requirement to elect a single disease is based on the ground that there is a common mechanism for treatment of all the recited injuries, diseases, disorders and conditions with poly-Glu,Tyr.

As taught on page 20, lines 12-28, of the specification:

[R]ecent evidence provided by the present inventors indicates that autoimmunity, that has long been viewed as a destructive process, is the body's endogenous response to CNS injury and its purpose is in fact beneficial. This neuroprotective autoimmunity was shown by the inventors to be inhibited by naturally occurring CD4⁺CD25⁺ cells, that suppressed an endogenous T-cell mediated neuroprotective mechanism to

achieve maximal activation of autoimmunity and, therefore, to withstand injury to the CNS (Kipnis et al., 2002a).

Thus, it can be summarized that the peripheral immune response to injury is part of a natural repair mechanism of the human body. This spontaneous T cell-mediated neuroprotective immune response can be enhanced by accumulation of activated T cells at the site of injury. This may be achieved either by active immunization of the individual with a nervous tissue-specific antigen, e.g. MBP, a MBP peptide, or an altered MBP peptide, or by passive immunization with MBP-activated T cells as shown previously by the inventors (Moalem et al., 1999; Hauben et al., 2001a; WO 99/060021; WO 02/055010), or by circumventing the tissue specificity using weak antigens like Copolymer 1 or poly-Glu,Tyr, or by down-regulating the suppressive effect of the Treg cells.

It has further been unexpectedly found in accordance with the present invention that poly-Glu,Tyr down-regulates the suppressive activity of the Treg cells on the autoimmune Teff cells. Thus, administration of poly-Glu,Tyr according to the present invention follows a fundamentally different approach to nerve preservation and restoration, taking advantage of natural physiological mechanisms of protection and self-healing via the immune system. As discussed above, activation of the autoimmune response is part of a physiological repair mechanism following CNS damage. However, this response is restricted in the CNS by naturally-occurring Treg cells. An appropriately controlled boost to the immune

response by administering poly-Glu,Tyr that down-regulates the suppressive activity of Treg on the autoreactive effector T cells, protects CNS cells from further degeneration and enhances functional recovery. This is accomplished by causing the effector T cells, which recognize their antigen at the lesion site, to home there, and activate the resident cells to eliminate self-destructive compounds that cause nerve degeneration and to secrete growth factors that may induce axonal elongation, synaptogenesis and neurogenesis.

Poly-Glu,Tyr is shown to down-regulate the suppressive activity of Treg cells on the Teff cells, and thus to boost the spontaneous protective activity of T cells at the site of injury or disease. Accordingly, contrary to the examiner's assertion, there is, indeed, a common mechanism for treatment of all the recited injuries, diseases, disorders and conditions with poly-Glu,Tyr.

With regard to the examiner's statement: "For example, Huntington's disease, recited in claim 12, is unrelated to HIV infection, recited in claim 36. HIV infection, recited in claim 36", it is respectfully pointed out to the examiner that claim 36 recites treatment of "amnesia or memory loss associated with HIV infection" and not treatment of HIV infection. The same is true for claim 14,

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which defines treatment of "peripheral neuropathy associated with HIV infection" and not treatment of HIV infection.

The examiner's attention is further directed to applicants' own U.S. Patent 6,844,314 in which the examiner accepted a common mechanism for Cop1 (a random copolymer as is poly-Glu,Tyr) for inhibition of CNS or PNS injuries and diseases, as well as protecting from glutamate toxicity. The present application is similar to U.S. Patent 6,894,314 in that there is a common mechanism for treatment of all the recited injuries, diseases, disorders and conditions with poly-Glu,Tyr. Accordingly, withdrawal of the requirement insofar as restriction to a single disease is respectfully requested.

Favorable consideration and allowance are hereby respectfully solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant(s)

By



Allen C. Yun
Registration No. 37,971

ACY:rd
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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